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EXAMINER	
WOODALL, NICHOLAS W	
ART UNIT	**PAPER NUMBER**
3775	
NOTIFICATION DATE	**DELIVERY MODE**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	**Application No.** 10/679,166	**Applicant(s)** SZAKELYHIDI ET AL.	
	Examiner Nicholas Woodall	**Art Unit** 3775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14,18-22,26-28,30-34,37,39-47,49-51 and 54-66* is/are pending in the application.

4a) Of the above claim(s) *19-22,26-28,30-33 and 56-66* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14,18,34,37,39-47,49-51,54 and 55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to applicant's amendment received on 12/31/2008.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durham (U.S. Patent 6,162,228) in view of Haynor (U.S. Patent 6,216,028).

Durham discloses a device comprising a cylindrical magnet positioned on an insertion rod positioned within a longitudinal opening of an intramedullary nail and held at a fixed position within the longitudinal opening of the intramedullary nail at a discrete position adjacent to a transverse screw hole in the intramedullary nail, a target comprising a sensor for sensing the orientation of a magnet and sensing different outputs between the sensor relative to the position of the sensor relative to the magnet, at least one drill sleeve that receives and aligns a drill bit with a transverse screw hole in the intramedullary nail, and a handle holding the sensor and the drill sleeve. The magnet provides a non-uniform and non-circular three-dimensional magnetic field oriented on an x-axis, y-axis, and a z-axis that is strong enough to be sensed by the sensor of the target, wherein the magnet is polarized along the longitudinal axis of the magnet. The examiner believes that Figure 6 of the reference shows that the magnet having a non-uniform magnetic field, i.e. not the same strength in all directions, wherein the fields are symmetrical about the longitudinal axis of the magnet, i.e. polarized along the longitudinal axis of the magnet. The sensor comprises at least one sensor (28 and 28a) that detects the magnetic flux lines of the magnet. Durham fails to disclose the device wherein the sensor comprises an array of sensors that detect the x-axis, y-axis, and z-axis orientation of the magnet, the magnet having a diameter less than about 4 mm, the magnet being made from Neodymium Iron Boron, and the device further comprising a readable display. Haynor teaches a device comprising a magnet placed within an implanted medical tube and a sensor using a set of at least three sets, i.e. three, four, five, etc, of magnetic sensors and a readable display, wherein the magnet is made from Neodymium Iron Boron (column 4 lines 12-16) in order to sense the orientation of the magnet in three dimensional space (column 2 lines 43-52) and to provide a small size high strength magnet. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of Durham wherein the sensor includes an array of at least three sets of magnetic sensors and to provide a magnet made from Neodymium Iron Boron in view of Haynor in order to sense the orientation of the magnet in three dimensional space (column 2 lines 43-52) and to provide a small size high strength magnet.

Regarding the device comprising a readable display, Durham discloses a device comprising a display in order to display the orientation of the magnet. Haynor teaches a device comprising a readable display, such as a liquid crystal display, in order to display the orientation of the magnet. Because both Durham and Haynor both disclose devices comprising displays, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute one display for the other in order to achieve the predictable results of displaying the orientation of the magnet.

Regarding the magnet having a diameter less than 4 mm, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a magnet having a diameter less than 4 mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

4. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durham (U.S. Patent 6,162,228) in view of Haynor (U.S. Patent 6,216,028) further in view of Admission (Applicant's Arguments/Response received on 07/09/2007).

The device of Durham as modified by Haynor discloses the invention as claimed except for the sensors being in an elliptical array. The applicant admitted in the applicant's response/response received on 07/09/2007 that the sensors being in an elliptical array is an obvious variation to the device (page 1 lines 16-28). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of Durham as modified by Haynor having the sensors in an elliptical array in view of the applicant's own admission of obviousness.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Durham (U.S. Patent 6,162,228) in view of Haynor (U.S. Patent 6,216,028) further in view of Hollis (U.S. Patent 6,081,741).

The device of Durham as modified by Haynor discloses the invention as claimed except for the readable display comprising several LEDs, wherein the LEDs are activated and/or inactivated via the sensors relationship with the magnet. The device of Durham as modified by Haynor discloses a device comprising a readable display in order to display the orientation of the magnet. Hollis teaches a device comprising a readable display including LEDs that activate and/or deactivate via the sensors relationship with the magnet in order to display the orientation of the magnet. Because both the device of Durham as modified by Haynor and Hollis both disclose device comprising readable displays, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute one readable display for the other in order to achieve the predictable results of displaying the orientation of the magnet.

6. Claims 34, 37, 39, 40-43, 46, 47, and 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durham (U.S. Patent 6,162,228) in view of Haynor (U.S. Patent 6,216,028) and in view of Admission (Applicant's Arguments/Response received on 07/09/2007).

Durham discloses a device comprising a cylindrical magnet positioned on an insertion rod positioned within a longitudinal opening of an intramedullary nail and held at a fixed position within the longitudinal opening of the intramedullary nail at a discrete position adjacent to a transverse screw hole in the intramedullary nail, a target comprising a sensor for sensing the orientation of a magnet and sensing different outputs between the sensor relative to the position of the sensor relative to the magnet, at least one drill sleeve that receives and aligns a drill bit with a transverse screw hole in the intramedullary nail, and a handle holding the sensor and the drill sleeve. The magnet provides a non-uniform and non-circular three-dimensional magnetic field oriented on an x-axis, y-axis, and a z-axis that is strong enough to be sensed by the sensor of the target, wherein the magnet is polarized along the longitudinal axis of the magnet. The examiner believes that Figure 6 of the reference shows that the magnet having a non-uniform magnetic field, i.e. not the same strength in all directions, wherein the fields are symmetrical about the longitudinal axis of the magnet, i.e. polarized along the longitudinal axis of the magnet. The sensor comprises at least one sensor (28 and 28a) that detects the magnetic flux lines of the magnet. Durham fails to disclose the device wherein the sensor comprises an array of sensors that detect the x-axis, y-axis, and z-axis orientation of the magnet, the device comprising two drill sleeves, the magnet being made from Neodymium Iron Boron, the sensors being in an elliptical array and the device further comprising a readable display. Haynor teaches a device comprising a magnet placed within an implanted medical tube and a sensor using a set of at least three sets, i.e. three, four, five, etc, of magnetic sensors and a readable display, wherein the magnet is made from Neodymium Iron Boron (column 4 lines 12-16) in order to sense the orientation of the magnet in three dimensional space (column 2 lines 43-52) and to provide a small size high strength magnet. The applicant admitted in the applicant’s response/response received on 07/09/2007 that the sensors being in an elliptical array is an obvious variation to the device (page 1 lines 16-28).It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of Durham wherein the sensor includes an array of at least three sets of magnetic sensors and to provide a magnet made from Neodymium Iron Boron in view of Haynor and to provide the sensors in an elliptical array in view of the applicant's admission of obviousness in order to sense the orientation of the magnet in three dimensional space (column 2 lines 43-52) and to provide a small size high strength magnet.

Regarding the device comprising a readable display, Durham discloses a device comprising a display in order to display the orientation of the magnet. Haynor teaches a device comprising a readable display, such as a liquid crystal display, in order to display the orientation of the magnet. Because both Durham and Haynor both disclose devices comprising displays, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute one display for the other in order to achieve the predictable results of displaying the orientation of the magnet.

Regarding the device further comprising two drill guides it would have been obvious to one having ordinary skill in the art at the time the invention was made to the device of Durham as modified by Haynor as further modified by the applicant's admission further comprising two drill guides, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

7. Claims 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durham (U.S. Patent 6,162,228) in view of Haynor (U.S. Patent 6,216,028) further in view of Admission (Applicant's Arguments/Response received on 07/09/2007) further in view of Hollis (U.S. Patent 6,081,741).

The device of Durham as modified by Haynor as further modified by the admission discloses the invention as claimed except for the readable display comprising several LEDs, wherein the LEDs are activated and/or inactivated via the sensors relationship with the magnet. The device of Durham as modified by Haynor as modified by the admission discloses a device comprising a readable display in order to display the orientation of the magnet. Hollis teaches a device comprising a readable display including LEDs that activate and/or deactivate via the sensors relationship with the magnet in order to display the orientation of the magnet. Because both the device of Durham as modified by Haynor as further modified by the admission and Hollis both disclose device comprising readable displays, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute one readable display for the other in order to achieve the predictable results of displaying the orientation of the magnet.

8. Claims 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durham (U.S. Patent 6,162,228) in view of Admission (Applicant's Arguments/Response received on 07/09/2007).

Durham discloses a device comprising a cylindrical magnet positioned within the longitudinal opening of an intramedullary nail, a target comprising a sensory for sensing the three-dimensional orientation of the magnet, and a display for displaying the orientation of the magnet relative to the sensor. The magnet provides a directional field having a three-dimensional orientation on the x-axis, y-axis, and z-axis. Durham fails to disclose the device wherein the magnet has a diameter of less than 4 mm, the sensors being arranged in an elliptical array, and the field of the magnet being sensed at a distance of about 10 cm. The applicant admitted in the applicant's response/response received on 07/09/2007 that the sensors being in an elliptical array is an obvious variation to the device (page 1 lines 16-28). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of Durham as modified by Haynor having the sensors in an elliptical array in view of the applicant's own admission of obviousness.

Regarding the magnet having a diameter less than 4 mm, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a magnet having a diameter less than 4 mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding the field being sensed at a distance of about 10 cm, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of Durham as modified by the admission wherein the magnet provides a field that is sensed at a distance of about 10 cm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Response to Arguments

9. Applicant's arguments filed 12/31/2008 have been fully considered but they are not persuasive. The applicant's argument that claims 44 and 45 where not rejected and are allowable is not persuasive. The 103 rejection under heading 9 (page 4 line15)

discusses the limitations of claims 44 and 45. The examiner made a typographical error in the heading of the rejection, but the claim limitations are clearly rejected under 35 U.S.C. 103(a) and were clearly not allowable. The applicant's argument that the limitations of claim 53 were not discussed in the previous office action is not persuasive. The 103 rejection under heading 9 discuss the limitations of claim 12 and 53, which are similar limitations. The examiner made a typographical error in the heading of the rejection, but the claim limitations are clearly rejected under 35 U.S.C. 103(a). The limitations are directed to the sensors sensing different outputs between the sensors relative to the different spatial positions of each sensor from the magnet. First, the examiner would like to note that the Durham reference discloses the sensors sense the magnet based on the position of the sensors relative to the magnet, which is then provided to the user via the readable display. Therefore, the examiner believes that the Durham reference clearly shows this limitation and was presented in the previous rejection (see page 4 lines 7-9). Furthermore, the examiner used the applicant's admission of obviousness to modify the sensors of Durham to include a pair of four sensors arranged in an elliptical array (see the 103 rejection under heading 9). The examiner believes the claim was clearly rejected under 35 U.S.C. 103(a) and were clearly not allowable. Since the errors were typographical errors and the examiner has not changed the rejections, the examiner believes that a final office action is proper. However, since the limitations of claim 53 where not explicitly stated, the examiner will make this action non-final. The examiner has provided new grounds of rejection as necessitated by the amendments.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 for cited references the examiner felt were relevant to the application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas Woodall whose telephone number is (571)272-5204. The examiner can normally be reached on Monday to Friday 8:00 to 5:30 EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Barrett can be reached on 571-272-4746. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nicholas Woodall/
Examiner, Art Unit 3775

/Thomas C. Barrett/
Supervisory Patent Examiner, Art Unit 3775